Please print or type in the unshaded areas only

#### VA0025020

Approval expires 8-34-98

**NPDES** 



United States Environmental Prote 

Washington, DC 20460

#### Application for Permit To Discharge Stormwater Discharges Associated with Industrial Activity 000

Paperwork Reduction Act Notice

Public reporting burden for this application is estimated to average 28.6 hours per application, including time for reviewing instructions, searching existing data sources gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate any other aspect of this collection of information, or suggestions for improving this form, including suggestions which may increase or reduce this burden to: Chief Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, DC 20460, or Director, Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

Outfall Location											
For each outfall, list the latitude a	nd longitude o	f its location	n to the near	rest 15 seco	nds and the	name of th	e receiving wate	er.			
A. Outfall Number									D. Receiving Wate	er 	
(list)		B. Latitude			C. Longitude	•			(name)		
007*	37°	15'	59"	79°	54'	18"			Roanoke Riv	or	
			_				<del> </del>				
008	37°	16'	00"	79°	54'	11"			Roanoke Riv	er	
009	37°	16'	00"	79°	54'	08"			Roanoke Riv	er	
	<del>                                     </del>						i e				
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ocation of Outfall 007 was ch	anged as a	result of t	he WPCP	improvem	ent projec	ct; new de	esignation ma	ay be r	equired		
	<u>                                     </u>				I		<u>                                     </u>				
mprovements											توزين
Are you now required by any Fed	eral. State. or	local autho	rity to meet	any impleme	entation sch	edule for th	e construction.	uparadi	ng or operation of w	astewater tre	atmen
equipment or practices or any off											
conditions, administrative or enfo										None	
4											Final
<ol> <li>Identification of Condition Agreements, Etc.</li> </ol>	ns,		<ol><li>Affecte</li></ol>	ed Outfalls						Complia	nce Da
Agreements, Etc.		number	sour	rce of discha	arge		3. Brief Descri	iption of	f Project	a. req.	b. p
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									AUG 2 2	2008	
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B. You may attach additional sheets describing any additional water pollution (or other environmental projects which may affect your discharges) you now have under way or which you plan. Indicate whether each program is now under way or planned, and indicate your actual or planned schedules for construction.

#### III. Site Drainage Map

Attach a site map showing topography (or indicating the outline of drainage areas served by the outfail(s) covered in the application if a topographic map is unavailable) depicting the facility including: each of its intake and discharge structures; the drainage area of each storm water outfall; paved areas and buildings within the drainage area of each storm water outfall, each know past or present areas used for outdoor storage or disposal of significant materials, each existing structural control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied; each of its hazardous waste treatment, storage r disposal units (including each area not required to have a RCRA permit which is used for accumulating hazardous waste under 40 CFR 262.34); each well where fluids from th acility are injected underground; springs, and other surface water bodies which receive storm water discharges from the facility.

See Attached Site Map & Storm Water Drainage Map.

IV Narrative	Description of Pollutant Sources					,
A.	For each outfall, provide an estimate of the	ne area (include unit	s) of impervious	surfaces (including	payed areas and building roofs) drain	ned to the outfall, and an estima
/ "	of the total surface area drained by the ou		o, opo		parad droad drip sendring recip, drain	100 10 (10 00)(11) 11/12 11/10 11/10
Outfall	Area of Impervious Surface	Total Area	Drained	Outfall	Area of Impervious Surface	Total Area Drained
Number	(provide units)	(provide	units)	Number	(provide units)	(provide units)
007	2.3 acres	3.2 ac	res	800	1.5 acres	3.9 acres
-/	]			009	4.9 acres	11.2 acres
				""		-
	<u> </u>					i
В.	Provide a narrative description of significate to storm water; method of treatment, store					
	these materials with storm water runoff; m	naterials loading and	l access areas; a	nd the location, ma	inner, and frequency in which pesticio	les, herbicides, soil conditioners
	and fertilizers are applied.					
See Attac	hment IV B				Feed (Fold (CF) Exist II I	A BARK CITA
					Part of Street	
					The state of the s	
						[ [
					AUG 2 2	2009
					A00 2 2	2000
] [					MACH HER CODE TO BE STORY	
					DEQ.W	CRO
					<u></u>	
C.	For each outfall, provide the location and	•	-		•	
	description of the treatment the storm wat any solid or fluid wastes other than by disc		ig trie scriedule a	and type of mainten	lance to control and treatment meas	ures and the unimate disposal t
	l	naigo.				1
Outfall Number			Treatmer	.4		List Codes from Table 2F-1
Number			Heanner	IL		Table 2F-1
	See Attachment IV C					
J						İ
V Nonetorm	water Discharges					
A.	I certify under penalty of law that the outfi	all(s) covered by thi	is application hav	ve been tested or e	evaluated for the presence of nonsto	rmwater discharges, and that a
	nonstormwater discharges from these outf				•	• .
	Name and Official Title (type or print)			Şi	gnature	Date Signed
Michael M	Inches Expositive Director M	lactowator	00 1	1	- 2	£1221
	cEvoy, Executive Director, W	vastewater	Mest	wel I.	M.Co	8/20/
Services			Proce		, " /	08
B.	Provide a description of the method used,	the date of any testi	ng, and the onsit	e drainage points th	nat were directly observed during a te	st
The outfal	lls and associated conveyand	ce systems w	ere observe	ed durina drv	weather conditions by C	lver Incorporated
	ern Virginia Water Authority s	-			<del>-</del>	
and recor	on virgina viater Admonty	stan on April	i, zooo and	110 110113 110	re observed.	
VI Significa	nt Leaks or Spills		•			
	g information regarding the history of signif	ficant leake or enille	of toyic or bazar	dage pollutante at t	the facility in the last three years inc	uding the approximate date and
	spill or leak, and the type and amount of ma		OF LOXIC OF HAZAF	dous politicants at t	me lacility in the last three years, incl	duling the approximate date and
None	<u></u>				• • •	
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#### VA0025020

VII. Discharge Information				
	eding. Complete one set of tables for each or are included on separate sheets numbered V		number in the space provided.	
currently use or manufacture as a	oy analysis-is any pollutant listed in Table 2F-2 n intermediate or final product or byproduct?	2, 2F-3, or 2F-4, a substanc		e which you
Yes (list all such pollutents below)			X No (go to section VIII)	
	SE	CEIVED P 2 2 2008 Q-WCRO		
VIII. Biological Toxicity Testing Data				
Do you have any knowledge or reason to be water in relation to your discharge within the Yes (list results below)  IX. Contract Analysis Information		R	EQ-WCRO	or en a receiving
	Il performed by a contract laboratory or consu d telephone number of, and pollulants analyzed	<del>-</del>	No (go to Section X)	
A. Name	B. Address	C. Area Code & Phone	e No, D. Pollutants /	Analyzed
REI Consultants	225 Industrial Park Drive Beaver, WV 25813	(304) 255-2500	All reported para	ımeters.
X. Certification				
assure that qualified personnel properly gath those persons directly responsible for gathen	ment and all attachments were prepared uniter and evaluate the information submitted. If the information submitted for submitting the information, including the	Based on my inquiry of the I is, to the best of my knowle possibility of fine and impris	person or persons who menag edge and belief, true, accurate, i	e the system or
Michael McEvoy, Executive Direct	or, Wastewater Services	(	540) 853-1449	
c. Signature Mules 17	1. En	Į.	2). Date Signed	

EPA Form 3510-2F (11-80)

Continued from Page 2

Page 3 of 3

EPA ID Number (copy from Item 1 of Form 1) FECEIVED Form Approved.

VA0025020 FORM Approved. Approved expires 8-31-98.

VII. Discharge Information (Continued from page 3 of Form 2F)

You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

				1 . 1		
Pollutant	1	ım Values de units)		ge Values de units)	Alumber)	WCROoutfall bo7
and CAS Number (If available)	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Storm Events Sampled	Sources of Pollutants
Oll and Grease	<5.0 mg/L	NA	<5.0 mg/L	NA	1	Surface Runoff
Biological Oxygen Demand (BOD5)	29 mg/L	4 mg/L	29 mg/L	4 mg/L	1	Surface Runoff
Chemical Oxygen Demand (COD)	30 mg/L	28 mg/L	30 mg/L	28 mg/L	1	Surface Runoff
Total Suspended Solids (TSS)	16 mg/L.	18 mg/L	16 mg/L	18 mg/L	1	Surface Runoff
Total Kjeldahl Nitrogen	1.4 mg/L	<1.0 mg/L	1.4 mg/L	<1.0 mg/L	1	Surface Runoff
Nitrate plus Nitrita Nitrogen	1.02 mg/L	0.76 mg/L	1.02 mg/L	0.76 mg/L	1	Surface Runoff
Total Phosphorus	0.40 mg/L	0.32 mg/L	0.40 mg/L	0.32 mg/L	1	Surface Runoff
рН	Minimum 7.51 S.U.	Maximum 7.51 S.U.	Minimum7.51 S.U.	Maximum 7.51 S.U.	1	Surface Runoff

Part B- List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (If the facility is operating under and existing NPDES permit). Complete one t

110000110		_	g or and permit, an	udamic and t		
Pollutant		n Values 'e units)	Average (includ	e Values e units)	Number	
and CAS Number (if avallable)	Grab Sample Taken During First 30 Minutes	Flow-weighled Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	of Storm Events Sampled	Sources of Pollutants
E. coli	88 N/100 mL	NA	88 N/100 mL	NA	1	Surface Runoff
Total Cyanide	<0.020 mg/L	NA	<0.020 mg/L	NA	1	Surface Runoff
Total Recoverable Nickel	<0.0050 mg/L	<0.0050 mg/L	<0.0050 mg/L	<0.0050 mg/L	1	Surface Runoff
Dissolved Hexavalent Chromium	<0.010 mg/L	<0.010 mg/L	<0.010 mg/L	<0.010 mg/L	1	Surface Runoff
Total Recoverable Mercury	<0.0010 mg/L	<0.0010 mg/L	<0.0010 mg/L	<0.0010 mg/L	1	Surface Runoff
Total Recoverable Selenium	<0.0200 mg/L	<0.0200 mg/L	<0.0200 mg/L	<0.0200 mg/L	1	Surface Runoff
Total Residual Chlorine	0.01 mg/L	NA	0.01 mg/L	NA	1	Surface Runoff
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Poliula	ınt		Maximum (include)		S			rage Values clude units)	Number		Outfall	007
and CAS Nur (if availa	nber		Grab Sample aken During		-iow-welghted Composite	Grab S Taken First Min.	ample During 130	Flow-weighted Composite	of Storm Events Sampled		Sources of Po	ollutants
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Part D-	Provide da	a for the s		h resuli	ted in the maximu	m values fo	or the fi	ow weighted composi 5.	le sample. 6.		1	8.
1. Pate of Storm Event	2. Duration o (In min	of Storm	3. Total rainfall during storm ev (in inches)		Number of hours beginning of sto ured and end of measurable ra	rm meas- previous	d	aximum flow rate uring rain event ns/minute or specify units)	Total flow rain eve (gallons specify u	enl or	7. Season sample was taken	Form of Precipitation (rainfall, snowmelt)
/10/2008	420 mi	nutes	0.12 inche	es	>72 hoi	ırs	3 a	allons/minute	1,260 ga		Summer	Rainfall
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Provide a desi	ription of the	e method	of flow measureme	nt or es	stlmate		L				· · · · · · · · · · · · · · · · · · ·	
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EPA ID Number (copy from item 1 of Form 1) Form Approved. OMB No. 2040-0086. VA0025020 proval expires 8-31-98. VII. Discharge Information (Continued from page 3 of Form 2F) Part A- You must provide the results of at least one analysis for every pollutent in this table. Complete one table for each outlaid. See instructions for additional deals. Maximum Values Average Values Outfall 008 Pollutant (include units) (include units) Number hne Grab Sample Grab Sample CAS Number Starth Events Taken During Taken During (if eyailable) Flow-weinhlad Flow-weighted Ŗ, mpled DECHACHE Composite Composite 30 Minutes 30 Minutes Oil and Grease <5.0 mg/L NΑ <5.0 mg/L 1 NA Silliace Runoff Biological Oxygen 32 mg/L 4 mg/L 32 mg/L 4 mg/L 1 Surface Runoff Demand (BOD5) Chemical Oxygen 202 mg/L 33 mg/L 202 mg/L Surface Runoff 33 mg/L 1 Demand (COD) Total Suspended 52 mg/L 78 mg/L 78 mg/L 52 mg/L 1 Surface Runoff Solids (TSS) Total Kjeldahl 3.8 mg/L 1.0 mg/L 3.8 mg/L 1.0 mg/L Surface Runoff 1 Nitrogen Nitrale plus Nitrite 0.30 mg/L 0.63 ma/L 0.63 ma/L 0.30 mg/L 1 Surface Runoff Näronen Total Phosphorus 0.84 mg/L 0.37 mg/L Surface Runoff 0.84 mg/L 0.37 mg/L 1 Minimum7.48 S.U. Maximum7.48 S.U. Minimum7.48 S.U. Maximum7.48 S.U. 1 Surface Runoff List each poliulant that is limited in an effluent guideline which the facility is subject to or any poliutent fisted in the facility's NPDES permit for its process wastewater (if the facility is operating under and existing NPDES permit). Complete one table for each cutfail. See the instructions for additional details and Part B. requirements. Maximum Values Average Values Pollutant (include units) (include units) Number Grab Sample Grab Sample nf CAS Number Taken During Taken During Storm Events (if available) First Flow-weighted First Flow-weighted Sampled 30 Minute Composite 30 Minute Composite Sources of Pollutants E. coli 54 N/100mL NA 54 N/100mL NA 1 Surface Runoff Total Cyanide <0.020 mg/L NA Surface Runoff <0.20 mg/L NA 1 Total Recoverable <0.0050 mg/L 0.0062 mg/L 0.0062 mg/L <0.0050 mg/L 1 Surface Runoff Mickel Dissolved Hexavalont <0.010 mg/L <0.010 mg/L **Surface Runoff** <0.10mg/L <0.010 mg/L 1 Chromium Total Recoverable <0.0010 mg/L <0.0010 mg/L <0.0010 mg/L Surface Runoff <0.0010 mg/L 1 Mercury Total Recoverable <0.0200 mg/L <0.0200 mg/L <0.0200 mg/L <0.0200 mg/L Surface Runoff 1 Selonium Total Residual <0.01 mg/L NÁ <0.01 mg/L NA 1 Surface Runoff Chlorine

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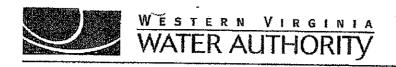
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and CAS Numbe (if available)	per (e)		b Sample en During Minutes	Fi	Flow-weighted Composite	Grab Sar Taken D First 3 Minuk	imple During 30	Flow-weighted Composite	of Storm Events		Sources of Pol	-th-danks
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Part D- Pro	ovide data for	r the stor	m event(s) whic	h resu	ited in the maximi	um values for t	he flow	weighted composite sa	ample,			
1. e of Storm   Du	2. Juration of Stor (In minutes)	om.	3. Total rainfall during storm eve	Į.	4. Number of hou beginning of st ured and end o	urs belween lorm meas- of previous	Ma du	5. aximum flow rate uring rain event ns/minute or specify	6. Total flow fi rain ever (gallons c	nt	7. Season sample was	8. Form of Precipitati (rainfalt,
	<u> </u>	+	(in inches)	$\longrightarrow$	measurable r		<del></del>	units)	specify uni		taken	snowmel
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6/2008 72	20 minut	es	2.00 inche	æ	>72 ho	ours	56 g	allons/minute	40,32 <b>0</b> ga	lions	Summer	Rainfa
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rovide a descr	ription of the	method r	of flow measurer	ment o	ır estimate							
_ £1.	ac datar	mino	d by setir	mati <sup>,</sup>	ng the tim	e if took <sup>(</sup>	to fil <sup>1</sup>	l a one-gallon	ı bucket.			

		EP	A ID Number (copy from	item 1 of Form 1)	DE	CEIV De la 2040-086.
			VA00250	20	HE	Approval expires 8-31-98.
	•	inued from page 3				
Part A- You mus	L provide the results of	at least one analysis fo	r every pollulant in this te	ble. Complete one tal	le for each outlat	. See instructions for additional de alis.
Pollulani		m Values de units)		e Values <i>le unils)</i>	Number _	Outfall 009
and	Grab Sample	1	Grab Sample			Q-WCRO
CAS Number (if available)	Taken During First	Flow-weighted	Taken During First	Flow-weighted	Sampled	
(ii available)	30 Minutes	Composite	30 Minutes	Composite	Jampies	Sources of Pollutents
Oil and Grease	<5.0 mg/L	NA	<5.0 mg/L	NA	1	Surface Runoff
Biological Oxygen Demand (BOD5)	<2.0 mg/L	<2.0 mg/i_	<2.0 mg/L	<2.0 mg/L	1	Surface Runoff
Chemical Oxygen Demand (COD)	73 mg/L	56 mg/L	73 mg/L	56 mg/L	1	Surface Runoff
Total Suspended Solids (TSS)	13 mg/L	12 mg/L	13 mg/L	12 mg/L	1	Surface Runoff
Total Kjeldahl Mitrogen	2.7 mg/L	2.0 mg/L	2.7 mg/L	2.0 mg/L	1	Surface Runoff
Nitrate plus Nitrite Nitrogen	1.39 mg/L	0.57 mg/L	1.39 mg/L	0.57 mg/L	1	Surface Runoff
Total Phosphorus	0.44 mg/L	0.34 mg/L	0.44 mg/L	0.34 mg/L	1	Surface Runoff
pH*	Minimum 7.88 S.U.	Maximum 7.68 S,U.	Minimum 7.68 S.U.	Maximum 7.68 S.U.	1 1	Surface Runoff
		in an effluent guideline i existing NPDES perm		ect to or any pollutant li	sled in the facilit	y's NPDES permit for its process wastewater (If
Pollutant		m Values 'e units)		e Values e units)	Number	
and	Grab Sample	e umay	Grab Sample	i in in in in in in in in in in in in in	of	
CAS Number	Taken During		Taken During		Storm Events	
(if avallable)	First 30 Minutes	Flow-weighted Composite	First 30 Minutes	Flow-weighted Composite	Sampled	Sources of Pollutants
	>32,000 col/100		>32,000 col/100			
E. coli	mL	NA	mL	NA .	1	Surface Runoff
Total Cyanide	<0.020 mg/L	NA	<0.020 mg/L	NA	1	Surface Runoff
Total Recoverable Nickel	<0.01 mg/L	<0.01 mg/L	<0.01 mg/L	<0.01 mg/L	1	Surface Runoff
Dissolved Hexavalent Chromium	<0.01 mg/L	<0.01 mg/L	<0.01 mg/L	<0.01 mg/L	1	Surface Runoff
Total Recoverable Mercury	<0.001 mg/L	<0.001 mg/L	<0.001 mg/L	<0.001 mg/L	1	Surface Runoff
Total Recoverable Selenium	<0.005 mg/L	<0.005 mg/L	<0.005 mg/L	<0.005 mg/L	1	Surface Runoff
Total Residual Chlorina*	0.15 mg/L**	NA	0.15 mg/L**	NA	1	Surface Runoff
told and Total I	Pasidual Chlori	no Doto word o	allogical for Out	-U 000 9/26/	2000 durin	g the same storm event as
Outfall 008 was		ne Data Were C	onected for Out	an 009 On 6/20/	zovo uumii	g the same storm event as
** Analytical Int	erference susp	ected			<u> </u>	
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Poliut	anf	1	Maximu <i>(Inclu</i>	ım Valu de units				age Values lude units)			Number		Outfall	009
and CAS Nu (II avalla	mber	Ta	ab Sample ken During First 30 Minutes		Flow-weighted Composite	Ta	ab Sample ken During First 30 Minutes	Flow-w	elghted		of Storm Events Sampled		Sources of P	ollulants
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Part D-	Provide das	ta for the		hich re	sulted in the maxin	num val	ves for the flo		omposil	e sar	nple. 6.		<del>,</del>	8.
1. ate of Storm Event	2. Duration o (in min	of Storm	3, Total rainfi during storm o (in inches	avent	Number of hi between beging storm measured of previous mea	ing of and end	avent feetle	5. low ratedurin rs/minute or s units)			Total flow for rain even (gallons of specify unit	l r	7, Season sample was taken	Form of Precipitatio (rainfall, snowmell)
5/28/08	143 mi	nutes	0.3 inch	es	> 72 hou	rs	33 gal	ons/min	ute	4,	719 gall	ons	Spring	Rainfal
Provide a des	cription of th	e method	of flow measure	ment o	r estimate						w <del></del>		······································	
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WASTEWATER DIVISION

September 10, 2008

Janis Richardson Western Virginia Water Authority Water Pollution Control Plant 1502 Brownlee Avenue, SE Roanoke, VA 24014

#### Sample Description

Stormwater Ourfall 008

Collection Date & Time: 08/26/08; 06:44 PM

Collected by: JR

Received in Lab: 08/27/06; 06:30 AM

Sample Results

Analysis: Escherichia coli

Result: 54 N/100ml

Date & Time Analyzed: 08/27/08; 07:46 AM

Analyst: RS

Method: IDEXX Colilert with Quanti-Tray 2000 Reference: IDEXX Colilert Instruction Sheet

Note: Sample was collected after normal lab hours and was not received until \* 08/27/08. It was set up outside of the holding time for wastewater samples. Sample was kept at <6° C from time of collection until time of preparation.

Certified by:

Lisa Workman

Laboratory Supervisor

3 of 3

## Western Virginia Water Authority

#### Water Pollution Control Plant Storm Water Sample Collection Notes

Date of last rain event (0.1"	or greater): 7721	hu	Hours since last rain	event (0.1" or greater):
Date: 7.10.08 Storm	n Start Time: 10:15	Storr	i End Time: <u>3) (</u>	uantity of Rain (inches): <u>0,13</u> '
	1,240 gallor	ns	Maximum Flow Rate	gallons per minute
OUTFALL 005.				_
Grab Sample: Time Colle	cted: 1/:/9 - 1/:	<u>30</u>	Sampler's Signature	Join Ruhandaco
Temperature: 21.6 °F.	Time of Analysis:		Analyst's Signature.	Janes Rechardse
pH: 7.5/ S.U. Tot. Res. Cl <sub>2</sub> : <u>0.01</u> mg/L			Analyst's Signature: Analyst's Signature	Jamie Richardson
Flow-weighted Composite	Sample:		•	
Time:	Level: 0.01"	Flow:	Event Volo	f Subsample: <u>4000</u>
Time:	Level: 0.01	Flow:	Event Vol. o	f Subsample: 1,200
Time:	Level: 0.01"	Flow:	Event Vol. o.	f Subsample: 1,700
Time:	Level:	Flow:	Vol. o.	f Subsample:
Time:	Level:	Flow:	Vol. o	f Subsample:
Time:	Level:	Flow:	Vol. o	f Subsample:
Time:	Level:	Flow:	Vol. o	f Subsample:
Time:	Level:	Flow:	Vol. o	f Subsample:
Time:		Flow:	Vol. of	Subsample:
Time:	Level:	Flow:	Vol. of	Subsample:
Time:	Level:	Flow:	Vol. or	Subsample:
Length of composite sample TOTAL VOLUME COLLECTION Sampler's Signature:	(time): <u>+ ユ</u> c CTED: ※ 3,000	3 mi	<u></u>	
Sampler's Signature:	is M. Lechouse	lso	ノ	



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REI Consultants, Inc. 225 Industrial Perk Rd. P.O. Box 286, Beaver, WV 25813 Phone: 304-255-2500 or 800-999-0105 FAX: 304-255-2572 e-mail: riabs@reiciabs.com

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CLIENT: LUVIL/II	ទ
ADDRESS: 1502 Brown (c e A UC	TEL
CITY/STATE/ZIP: ATA DO CE 1/2 Z 40/4	FAX
BILL TO:	Ę
GITY/STATE/ZIP:	E
PURCHASE ORDER #	PHC
QUOTE#	e,

CHAIN OF CUSTODY RECORD NO. 221801	CONTACT PERSON: Contract Service Servi	FAX #: (540) 853-1307	E-MAIL ADDRESS:	SITE ID & STATE	PROJECT ID: 2 2 Programment of the project of the p	BAMPIER: LE THELTON WALLE
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REI Consultants, Inc. 225 industrial Park Rd. P.O. Box 286, Beaver, WV 25813 Phone: 304-255-2500 or 800-899-0105 FAX: 304-255-2572 e-mail: riabs@reioiabs.com

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CLIENT: Western 1/2 Water Authority	
ADDRESS: 1503 Brawn (ce have ST	
GITY/STATE/ZIP: ROLLYORCE, 16 20014	
BILL TO: Sons Richardson	
CITY/STATE/ZIP:	
PURCHASE ORDER #	
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CHAIN OF CUSTODY RECORD NO. 231 AR&	I'M YO WATE ALTEMENTY CONTACT PERSON AND KING	TELEPHONE #: (S/O) 853 (5/7	FAX#: (5 40) 853 - 1,307	E-WAIL ADDRESS:	SITE ID & STATE:	PROJECT (I)	SAMPLER
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**非常性的相互图的的特色** 

**Analytical Results** 

Date: 10-Sep-08

CLIENT:

WESTERN VA WATER WWTP

Client Sample ID: SW008 GRAB

Project:

STORM WATER

Site ID:

WorkOrder:

0808163

Lab ID;

0808I63-02A

Collection Date: 8/26/2008 6:30:00 PM

Matrix:

SURFACE WATER

Analyses	Result Units	Qual	PQL	MCL	Prep Date	Date Analyzed
METALS BY ICP		E200.7	, , , , , , , , , , , , , , , , , , , ,		Analyst: BM	***************************************
Nickel	0.0062 mg/L		0.0050	NA	08/28/08 10:14 AM	A 08/28/08 2:23 PM
Selenium	ND mg/L		0.0200	NA	08/28/08 10:14 AN	A DB/28/08 2:23 PM
MERCURY, TOTAL		E245.1			Analyst: CGV	t
Mercury	ND mg/L		0.0010	NA	08/28/08 10:55 AN	// 09/03/08 11: <b>0</b> 4 AM
HEXAVALENT CHROMIUM, DISSOLVED		SM3500-CR D			Analyst: JD	
Chromium, Hexavalent	ND mg/L		0.010	NA	08/28/08 10:14 AN	08/27/08 4:53 PM
NOTES:	70 D L - 1 J H D		-t		on alternative detactions	. (:::
Analyzed by 200.9 for total Chromium within 20	JO.9 NoIO time. R	•	. caromium not j	nesen ar		i proit.
30D, 5 DAY, 20°C		SM5210 B			Analyst: JaR	
Biochemical Oxygen Demand	32 mg/L		2	NA	08/28/08 6:32 AM	09/02/08 8:38 AM
CHEMICAL OXYGEN DEMAND		E410.4			Analyst: DSA	
Chemical Oxygen Demand	202 mg/L		10	NA		08/29/08 3:30 PM
CYANIDE		E335.4			Analyst: BA	
Cyanide, Total	ND mg/L		0.020	NA		09/04/08 12:30 PM
ANIONS BY ION CHROMATOGRAPHY		SM4110B			Analyst: SB	
Nitrogen, Nitrate-Nitrite	0.63 mg/L		0.10	NA	-	09/02/08 7:39 PM
PHOSPHORUS		SM4500-P BE			Analyst: SB	
Phosphorus, Total	0.84 mg/L	ŢM,,3301 Z	0.50	NA		09/04/08 10:45 AM
OTAL KJELDAHL NITROGEN (TKN)		SM4500-NORGC			Analyst: JL	
Nitrogen, Kjeldahl, Tolal	3.8 mg/L	0111400-1101/00	1.0	NA	rinalyou of	08/28/08 7:00 AM
		E4054	•		Analimi, Pi	
DIL AND GREASE Oil & Grease	ND mg/L	E1664	5.0	NA	Analyst: <b>J</b> L	08/28/08 8:00 AM
	14th 11the		3.0	וארו		COLEGICO DIGO FIN
OTAL SUSPENDED SOLIDS	<b>50</b>	SM2540 D	غ غ	4.5.5	Analyst: <b>GV</b>	ANIO 200 B 48 414
Total Suspended Solids	78 mg/L		1	NA		08/28/08 7:45 AM

Key:	MCL	Maximum Contaminant Level
	MDL	Minimum Detection Limit

NA Not Applicable ND Not Detected at the PQL or MDL

PQL Practical Quantitation Limit

Tentatively Identified Compound, Estimated Concentrati

Qualifiers: B Analyte detected in the associated Method Blank

Estimated Value above quantitation range

Holding times for preparation or analysis exceeded

Spike/Surrogate Recovery outside accepted recovery limit

Value exceeds Maximum Contaminant Level

Page 3 of 3

**Analytical Results** 

Date: 10-Sep-08

CLIENT:

WESTERN VA WATER WWTP

Client Sample ID: SW008 COMP

Project:

STORM WATER

WorkOrder:

0808163

Lab ID:

0808163-01A

Collection Date: 8/27/2008 7:20:00 AM

Site ID:			Matrix:	SU	RFACE WATER	
Analyses	Result Units	Qual	PQL	MCL	Prep Date	Date Analyzed
METALS BY ICP		E200.7		······································	Analyst: BM	
Nickel	ND mg/L		0.0050	NA	08/28/08 10:14 AN	/ 08/28/08 2:12 PM
Selenium	ND mg/L		0.0200	NA	08/28/08 10:14 AM	A 08/28/08 2:12 PM
MERCURY, TOTAL		E245.1			Analyst: CGV	i
Mercury	ND mg/L		0.0010	NΑ	08/28/08 10:55 AN	/ 09/03/08 11:02 AM
HEXAVALENT CHROMIUM, DISSOLVED		SM3500-CR D			Analyst: JD	
Chromium, Hexavalent NOTES:	ND mg/L		0.010	NA	•	08/27/08 4:43 PM
Analyzed by 200.9 for total Chromium within 20	00.9 hold time. Re	sults verify hexavalent	chramium not p	present at c	r above the detection	ı ilmit.
BOD, 5 DAY, 20°C		SM5210 B			Analyst: JaR	
Blochemical Oxygen Demand	4 mg/L		2	NA	08/28/08 6:30 AM	09/02/08 8:35 AM
CHEMICAL OXYGEN DEMAND		E410.4			Analyst: DSA	
Chemical Oxygen Demand	33 mg/L		10	NA	•	08/28/08 12:30 PM
ANIONS BY ION CHROMATOGRAPHY		SM4110B			Analyst: SB	
Nitrogen, Nitrate-Nitrite	0.30 mg/L		0.10	NA		09/02/08 7:39 PM
PHOSPHORUS		SM4500-P BE			Analyst: SB	
Phosphorus, Total	0.37 mg/L		0.25	NA	•	09/03/08 9:45 AM
TOTAL KJELDAHL NITROGEN (TKN)		SM4500-NORGC			Analyst: JL	
Nitrogen, Kjeldahl, Total	1.0 mg/L		1.0	NA	•	08/28/08 7:00 AM
TOTAL SUSPENDED SOLIDS		SM2540 D			Analyst: GV	
Total Suspended Solids	52 mg/L		1	250	. manyon we	08/28/08 7:45 AM
'A						

Key:	MCL	Maximum Contaminant Level	Qualifiers:	3	Analyte detected in the associated Method Blank	
	MDL	Minimum Detection Limit		E	Estimated Value above quantitation range	
	NA	Not Applicable		H	Holding times for preparation or analysis exceeded	
	ND	Not Detected at the PQL or MDL		5	Spike/Surrogate Recovery outside accepted recove	ry limit
	PQL	Practical Quantitation Limit		#	Value exceeds Maximum Contaminant Level	Page 2 of 3
	TIC	Tentatively Identified Compound, Estimated Concent	rati			



improving the environment, one client at a time...

225 Industrial Park Drive Beover, WY 25813 TEL: 304.255.2500 FAX: 304.255.2572

Website: www.relclabs.com

Report Narrative

Project Manager:: Joy Mullins

WO#: Date: 0808163 9/10/2008

CLIENT:

WESTERN VA WATER WWTP

Project:

STORM WATER

All analyses were performed using documented laboratory SOPs that incorporate appropriate quality control procedures as described in the applicable methods. REI Consultants, Inc. (REIC) technical managers have verified compliance of reported results with the REIC's Quality Program and SOPs, except as noted in this case narrative. Any deviation from compliance is explained below and/or identified within the body of this report by a qualifier footnote which is defined at the bottom of each page.

All samples were analyzed using the methods stated in the analytical report without modification, unless otherwise noted.

All sample results are reported on an "as-received" basis unless otherwise noted.

Results reported for sums of individual parameters, such as Total Trihalomethanes (TTHM) and Total Haloacetic Acids (HAA5), may vary slightly from the sum of the individual parameter results. This apparent anomaly is caused by rounding individual results and summations at reporting, as required by EPA.

Following standard laboratory protocol, sample preservation, such as pH, is verified at time of extraction or analysis based on client requested parameters. Improper preservation is noted on the analytical bench sheet, extraction log, or preservation log and client is notified by close of following business day. All results are reported using preservation compliant samples unless otherwise noted in the analytical report.

The test results in this report meet all NELAP requirements for parameters for which accreditations are required or available. Any exceptions are noted in this report. This report may not be reproduced, except in full, without the written approval of REIC.

In compliance with federal guidelines and standard operating procedures, all reports, including raw data and supporting quality control, will be disposed of after five years unless otherwise arranged by the client via written notification or contract requirement.

If you have any questions please contact the project manager whose name is listed above.



225 Industrial Park Drive

Beaver, WV 25813

TEL: 304.255.2500

FAX: 304.255.2572

Website: www.reiglahs.com

improving the environment, one client at a time...

September 10, 2008

JANIS RICHARDSON WESTERN VA WATER WWTP 1540 UNDERHILL AV ROANOKE VA 24014

TEL: (540) 853-1517 FAX (540) 853-1307

RE: STORM WATER

Dear JANIS RICHARDSON:

Order No.: 0808163

REI Consultants, Inc. received 2 sample(s) on 8/27/2008 for the analyses presented in the following report.

Please note two changes you may see on your report.

- Results for "Dissolved" parameters will be shown under a separate sample ID, rather than as a separate analysis under the same sample ID. The sample ID for "Dissolved" parameters will include "Field Filtered" or "Lab Filtered", as appropriate.
- Metals results will no longer be identified as "Total" or "Total Recoverable". The
  methods have not been changed, only their appearance on the report.

If you have any questions regarding these results, please do not hesitate to call.

Sincerely,

Joy Mullins

Project Manager





WASTEWATER DIVISION

September 11, 2008

Janis Richardson Western Virginia Water Authority Water Pollution Control Plant 1502 Brownlee Avenue, SE Roanoke, VA 24014

#### Sample Description

### Stormwater Outfall:007

Collection Date & Time: 09/10/08; 11:30 AM

Collected by: JR

Received in Lab: 09/10/08; 11:40 AM

#### Sample Results

Analysis: *Escherichia* coli Result: 88 N/100ml

Date & Time Analyzed: 09/10/08; 11:46 AM

Analyst: SK

Method: IDEXX Collect with Quanti-Tray 2000 Reference: IDEXX Collect Instruction Sheet

Note: Analyst had trouble getting the Quanti-Tray/2000 to go through sealer. It had to be tried four times before it would go all the way through. The small wells were repeatedly heated during this process.

Certified by:

Lisa Workman

Laboratory Supervisor

**Analytical Results** 

Date: 17-Sep-08

CLIENT:

WESTERN VA WATER WWTP

Client Sample ID: SW 007 GRAB Project:

STORM WATER 007

Site ID:

WorkOrder:

0809739

Lab ID:

0809739-01A

Collection Date: 9/10/2008 11:19:00 AM

Matrix:

SURFACE WATER

Analyses	Result Units	Quat	PQL	MCL	Prep Date	Date Analyzed
METALS BY ICP		E200.7			Analyst: BM	
Nickel	ND mg/L		0.0050	NA	09/11/08 8:25 AM	09/11/08 6:56 PM
Selenium	ND mg/L		0.0200	NA	09/11/08 8:25 AM	09/11/08 6:56 PM
MERCURY, TOTAL		E245.1			Analyst: CGW	i
Mercury	ND mg/L		0.0010	NA	09/12/08 10:27 AN	/ 09/16/08 10:23 AM
HEXAVALENT CHROMIUM, DISSOLVED		SM3500-CR D			Analyst: CGV	t
Chromium, Hexavalent	ND mg/L		0.010	NA		09/11/08 8:36 AM
BOD, 5 DAY, 20°C		SM5210 B			Analyst: JaR	
Biochemical Oxygen Demand	29 mg/l.		2	NA	09/11/08 6:50 AM	09/16/08 7:48 AM
CHEMICAL OXYGEN DEMAND		E410.4			Analyst: DSA	
Chemical Oxygen Demand	30 mg/L		10	NA		09/12/08 4:10 PM
CYANIDE		E335.4			Analyst: BA	
Cyanide, Total	ND mg/L		0.020	NA	-	09/12/08 2:00 PM
ANIONS BY ION CHROMATOGRAPHY		SM4110B			Analyst: JJ	
Nitrogen, Nitrate-Nitrite	1.02 mg/L		0.10	NA	-	09/12/08 2:33 AM
PHOSPHORUS		SM4500-P BE			Analyst: GV	•
Phosphorus, Total	0.40 mg/L		0.05	NA	•	09/17/08 1:00 PM
TOTAL KJELDAHL NITROGEN (TKN)		SM4500-NORGC			Analyst: <b>JL</b>	
Nitrogen, Kjeldahl, Total	1.4 mg/L		1.0	NA	• • • • • • • • • • • • • • • • • • • •	09/15/08 7:00 AM
OIL AND GREASE		E1664			Analyst: JL	
Oil & Grease	ND mg/L	•	5.0	NA		09/15/08 8:30 AM
TOTAL SUSPENDED SOLIDS		SM2540 D			Analyst: <b>GV</b>	
Total Suspended Solids	16 mg/L	OHEOTO M	1	NA	. alacyot. GV	09/11/08 8:50 AM

Key:	MCL	Maximum	Contaminant	Leve
------	-----	---------	-------------	------

Not Applicable

e.

MDL Minimum Detection Limit

Not Detected at the PQL or MDL

PQL Practical Quantitation Limit

Tentatively Identified Compound, Estimated Concentrati

Qualifiers: B

Analyte detected in the associated Method Blank

Estimated Value above quantitation range

Holding times for preparation or analysis exceeded

Spike/Surrogate Recovery outside accepted recovery limit

Value exceeds Maximum Contaminant Level

Page 2 of 3

**Analytical Results** 

Date: 17-Sep-08

CLIENT:

WESTERN VA WATER WWTP

Client Sample ID: SW 007 COMP

Project:

STORM WATER 007

Site ID:

WorkOrder:

0809739

Lab ID:

0809739-02A

Collection Date: 9/10/2008 3:10:00 PM

Matrix:

SURFACE WATER

Analyses	Result Units	Qual	PQL	MCL	Prep Date	Date Analyzed
METALS BY ICP		E200.7			Analyst: BM	
Nickel	ND mg/L		0.0050	NA	09/12/08 9:53 AM	09/15/08 4:47 PM
Selenium	ND mg/L		0.0200	NA	09/12/08 9:53 AM	09/15/08 4:47 PM
MERCURY, TOTAL		E245.1			Analyst: CGV	/
Mercury	ND mg/L		0.0010	NA	09/12/08 10:27 AM	л 09/16/08 10:24 AM
HEXAVALENT CHROMIUM, DISSOLVED		SM3500-CR D			Analyst: JD	
Chromium, Hexavalent	ND mg/L		0.010	NA	09/12/08 9:53 AM	09/11/08 4:34 PM
BOD, 5 DAY, 20°C		SM5210 B			Analyst: JaR	
Biochemical Oxygen Demand	4 mg/L		2	NA	09/12/08 12:46 PM	/ 09/17/08 9:36 AM
CHEMICAL OXYGEN DEMAND		E410.4			Analyst: DSA	
Chemical Oxygen Demand	28 mg/L		10	NA		09/12/08 4:10 PM
ANIONS BY ION CHROMATOGRAPHY		SM4110B			Analyst: JJ	
Nitrogen, Nitrate-Nitrite	0.76 mg/L		0.10	NA		09/13/08 3:18 AM
PHOSPHORUS		SM4500-P BE			Analyst: GV	
Phosphorus, Total	0.32 mg/L		0.05	NA		09/17/08 1:00 PM
TOTAL KJELDAHL NITROGEN (TKN)		SM4500-NORGC			Analyst: JL	
Nitrogen, Kjeldahi, Total	ND mg/L		1.0	NA		09/15/08 7:00 AM
TOTAL SUSPENDED SOLIDS		SM2540 D			Analyst: GV	
Total Suspended Solids	18 mg/L		1	NA	-	09/12/08 8:20 AM

Key:	MCL	Maximum Contaminant Level
	MEDI	Minimum Detection Limit

NA Not Applicable

ND Not Detected at the PQL or MDL

PQL Practical Quantitation Limit

Tennatively Identified Compound, Estimated Concentrati

Qualifiers: B

Analyte detected in the associated Method Blank

Estimated Value above quantitation range

Holding times for preparation or analysis exceeded

Spike/Surrogate Recovery outside accepted recovery limit

Value exceeds Maximum Contaminant Level

Page 3 of 3



improving the environment, one client at a time...

225 Industrial Park Drive Beaver, WY 25813 TEL: 304.255.2500 FAX: 304.255.2572 Website: www.reiclabs.com

Report Narrative

Project Manager:: Joy Mullins

June-

WO#: Date: 0809739 9/17/2008

CLIENT:

WESTERN VA WATER WWTP

Project:

STORM WATER 007

All analyses were performed using documented laboratory SOPs that incorporate appropriate quality control procedures as described in the applicable methods. REI Consultants, Inc. (REIC) technical managers have verified compliance of reported results with the REIC's Quality Program and SOPs, except as noted in this case narrative. Any deviation from compliance is explained below and/or identified within the body of this report by a qualifier footnote which is defined at the bottom of each page.

All samples were analyzed using the methods stated in the analytical report without modification, unless otherwise noted.

All sample results are reported on an "as-received" basis unless otherwise noted.

Results reported for sums of individual parameters, such as Total Trihalomethanes (TTHM) and Total Haloacetic Acids (HAA5), may vary slightly from the sum of the individual parameter results. This apparent anomaly is caused by rounding individual results and summations at reporting, as required by EPA.

Following standard laboratory protocol, sample preservation, such as pH, is verified at time of extraction or analysis based on client requested parameters. Improper preservation is noted on the analytical bench sheet, extraction log, or preservation log and client is notified by close of following business day. All results are reported using preservation compliant samples unless otherwise noted in the analytical report.

The test results in this report meet all NELAP requirements for parameters for which accreditations are required or available. Any exceptions are noted in this report. This report may not be reproduced, except in full, without the written approval of REIC.

In compliance with federal guidelines and standard operating procedures, all reports, including raw data and supporting quality control, will be disposed of after five years unless otherwise arranged by the client via written notification or contract requirement.

If you have any questions please contact the project manager whose name is listed above.



Improving the environment, one client at a time...

225 Industrial Park Drive Beaver, WV 25813 TEL: 304.255.2500 FAX: 304.255.2572

Website: www.reiclabs.com

September 17, 2008

JANIS RICHARDSON
WESTERN VA WATER WWTP
1540 UNDERHILL AV
ROANOKE VA 24014

TEL: (540) 853-1517 FAX (540) 853-1307

RE: STORM WATER 007

Dear JANIS RICHARDSON:

Order No.: 0809739

REI Consultants, Inc. received 2 sample(s) on 9/10/2008 for the analyses presented in the following report.

Please note two changes you may see on your report.

- Results for "Dissolved" parameters will be shown under a separate sample ID, rather than as a separate analysis under the same sample ID. The sample ID for "Dissolved" parameters will include "Field Filtered" or "Lab Filtered", as appropriate.
- Metals results will no longer be identified as "Total" or "Total Recoverable". The
  methods have not been changed, only their appearance on the report.

If you have any questions regarding these results, please do not hesitate to call.

Sincerely,

Joy Mullins

Project Manager





225 Industrial Park Drive
Beaver, WV 25813
TEL: 304.255.2500
FAX: 304.255.2572
Website: www.reiclabs.com

Improving the environment, one client at a time...

June 05, 2008

JANIS RICHARDSON WESTERN VA WATER WWTP 1502 BROWNLEE AV SE ROANOKE VA 24014

TEL: (540) 853-1517 FAX (540) 853-1307

**RE: STORMWATER 009** 

Dear JANIS RICHARDSON:

Order No.: 0805H84

REI Consultants, Inc. received 2 sample(s) on 5/29/2008 for the analyses presented in the following report.

Please note two changes you may see on your report.

- Results for "Dissolved" parameters will be shown under a separate sample ID, rather than as a separate analysis under the same sample ID. The sample ID for "Dissolved" parameters will include "Field Filtered" or "Lab Filtered", as appropriate.
- Metals results will no longer be identified as "Total" or "Total Recoverable". The
  methods have not been changed, only their appearance on the report.

If you have any questions regarding these results, please do not hesitate to call.

Sincerely,

Joy Mullins

Project Manager





225 Industrial Park Drive Beaver, WY 25813 TEL: 304,255.2500 PAX: 304,255.2572 Website: www.reiclabs.com

improving the environment, one client at a time ...

## Report Narrative

Project Manager:: Joy Mullins

WO#:

0805H84 6/5/2008

CLIENT:

WESTERN VA WATER WWTP

Project:

STORMWATER 009

All analyses were performed using documented laboratory SOPs that incorporate appropriate quality control procedures as described in the applicable methods. REI Consultants, Inc. (REIC) technical managers have verified compliance of reported results with the REIC's Quality Program and SOPs, except as noted in this case narrative. Any deviation from compliance is explained below and/or identified within the body of this report by a qualifier footnote which is defined at the bottom of each page.

All samples were analyzed using the methods stated in the analytical report without modification, unless otherwise noted.

All sample results are reported on an "as-received" basis unless otherwise noted.

Results reported for sums of individual parameters, such as Total Trihalomethanes (TTHM) and Total Haloacetic Acids (HAA5), may vary slightly from the sum of the individual parameter results. This apparent anomaly is caused by rounding individual results and summations at reporting, as required by EPA.

Following standard laboratory protocol, sample preservation, such as pH, is verified at time of extraction or analysis based on client requested parameters. Improper preservation is noted on the analytical bench sheet, extraction log, or preservation log and client is notified by close of following business day. All results are reported using preservation compliant samples unless otherwise noted in the analytical report.

The test results in this report meet all NELAP requirements for parameters for which accreditations are required or available. Any exceptions are noted in this report. This report may not be reproduced, except in full, without the written approval of REIC.

In compliance with federal guidelines and standard operating procedures, all reports, including raw data and supporting quality control, will be disposed of after five years unless otherwise arranged by the client via written notification or contract requirement.

# **Analytical Results**

Date: 05-Jun-08

CLIENT:

WESTERN VA WATER WWTP

Client Sample ID: SW 009 GRAB

Project: STORMWATER 009

Site ID:

WorkOrder:

0805H84

Lab ID:

0805H84-01A

Collection Date: 5/28/2008 1:57:00 PM

Matrix:

STORMWATER

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP-MS			E200.8			Analyst: DBB
Nickei	ND	mg/L		NA	0.0100	6/2/2008 10:51:21 AM
Sefenium	ND	mg/L		NA	0.0050	6/2/2008 10:51:21 AM
MERCURY, TOTAL			E245.1			Analyst: DL
Mercury	ND	mg/L		NA	0.0010	5/30/2008 1:38:00 PM
HEXAVALENT CHROMIUM, DISSOLVED			SM3500-CR	)		Analyst: CHW
Chromium, Hexavaleni	ND	mg/L		NA	0.010	5/29/2008 11:41:00 AM
M-COLI BLUE24			E10029			Analyst: KK
E-Coll	> 32000	col/100mL		NA	1	5/29/2008 4:40:00 PM
BOD, 5 DAY, 20°C			SM5210 B			Analyst: BS
Biochemical Oxygen Demand	ND	rng/L		NA	2	6/3/2008 1:02:00 PM
CHEMICAL OXYGEN DEMAND			E410.4			Analyst: DSA
Chemical Oxygen Demand	73	mg/L		NA	10	5/30/2008 12:40:00 PM
CYANIDE			E335.4			Analyst: BA
Cyanide, Total	ND	mg/L		NA	0.020	6/2/2008 12:10:00 PM
ANIONS BY ION CHROMATOGRAPHY			SM4110B			Analyst: SB
Nitrogen, Nitrate-Nitrite	1.39	mg/L		NA	0.10	6/2/2008 8:22:00 PM
PHOSPHORUS			SM4500-P BE			Analyst: SB
Phosphorus, Total	0.44	mg/L		NA	0.05	6/9/2008 9:15:00 AM
TOTAL KJELDAHL NITROGEN (TKN)			SM4500-NORG	C		Analyst: JL
Nitrogen, Kjeldahl, Total	2.7	mg/L	:	NA	1.0	6/3/2008 7:30:00 AM
OIL AND GREASE			E1664			Analyst: JL
Oil & Grease	ND	mg/L		NA	5.0	6/4/2008 9:30:00 AM
TOTAL SUSPENDED SOLIDS			SM2540 D			Analyst: GV
Total Suspended Solids	13	mg/L		NA	1	5/30/2008 8:00:00 AM

Kev:	MCL	Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	MDL	Minimum Detection Limit	E	Estimated Value above quantitation range
	NA	Not Applicable	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the PQL or MDL	ន	Spike/Surrogate Recovery outside accepted recovery limits
	PQL	Practical Quantitation Limit	*	Value exceeds Maximum Contaminant Level
	TIC	Tentatively Identified Compound, Estimated Concentrati	ion	

**Analytical Results** 

Date: 05-Jun-08

CLIENT:

WESTERN VA WATER WWTP

Client Sample ID: SW 009 COMP

Project:

STORMWATER 009

Site ID:

WorkOrder:

0805H84

Lab ID:

0805H84-02A

Collection Date: 5/28/2008 5:00:00 PM

Matrix:

STORMWATER

Analyses	Result	Units	Qual :	MDL	PQL	Date Analyzed
METALS BY ICP-MS			E200.8			Analyst: DBB
Nickel	ND	mg/L		NA	0.0100	6/2/2008 10:57:11 AM
Selenium	ND	mg/L		NA	0.0050	6/2/2008 10:57:11 AM
MERCURY, TOTAL			E245.1			Analyst: DL
Mercury	ND	mg/L		NA	0.0010	5/30/2008 1:40:00 PM
HEXAVALENT CHROMIUM, DISSOLVED			SM3500-CR D			Analyst: CHW
Chromium, Hexavalent	ND	mg/L	н	NA	0.010	5/29/2008 4:52:00 PM
BOD, 5 DAY, 20°C			SM5210 B			Analyst: BS
Blochemical Oxygen Demand	ND	mg/L		NA	2	6/3/2008 1:04:00 PM
CHEMICAL OXYGEN DEMAND			E410.4			Analyst: DSA
Chemical Oxygen Demand	56	mg/L		NA	10	5/30/2008 12:40:00 PM
ANIONS BY ION CHROMATOGRAPHY			SM4110B			Analyst: SB
Nitrogen, Nitrate-Nitrite	0.57	mg/L		NA	0.10	6/2/2008 10:10:00 PM
PHOSPHORUS			SM4500-P BE			Analyst: SB
Phosphorus, Total	0.34	mg/L		NA	0.05	6/3/2008 9:15:00 AM
TOTAL KJELDAHL NITROGEN (TKN)			SM4500-NORG6	3		Analyst: <b>JL</b>
Nitrogen, Kjeldahl, Total	2.0	mg/L		NA	1.0	6/3/2008 7:30:00 AM
TOTAL SUSPENDED SOLIDS			SM2540 D			Analyst: GV
Total Suspended Solids	12	mg/L		NA	1	5/30/2008 8:00:00 AM

Kev:	MCL	Maximum	Contamina	at Level
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MDL Minimum Detection Limit

NA Not Applicable

ND Not Detected at the PQL or MDL

PQL Practical Quantilation Limit

TIC Tentatively Identified Compound, Estimated Concentration

Analyte detected in the associated Method Blank

Estimated Value above quantitation range

Holding times for preparation or analysis exceeded

Spike/Surrogate Recovery outside accepted recovery limits

Value exceeds Maximum Contaminant Level



REI Consultants, Inc. 225 Industrial Park Rd. P. O. Box 280: Belsyer, WV 25813 Phone: 304-255-2572 PAX: 304-255-2572 e-mäti riabseretstabs.com

PURCHASE ORDER #

PROJECTIO: Storem Water

200

E-MAIL ADDRESS: SITE ID & STATE:

QUOTE #

BILLTO	CITY/STATE/ZIP KOCING KOO, VEL 240/4 FAX #	ADDRESS: 1502 Brown 100 HVE TELEPHONE # (546) 853-1515	CLIENT: LUNGOFF	CHAIN
E-MAIL ADDRESS:	FRAX #:	ME# (546) 853-1575	CONTACT PERSON:	CHAIN OF CUSTODY RECORD NO. 221835

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REI Consultants, Inc. 225 Industrial Park Rd. P.O. Box 286, Beaver, WY 25813 Phone: 304-255-2570 of 800-998-0105 FAX: 304-255-2572 e-mail: rlabs@reiclabs.com

PURCHASE ORDER II

# TIOND

BILL TO: Phove	CHYSTATEIZIP ROCK OK- VO 24014	ADDRESS: 1502 Brown, Lee	CLIENT WILLIAM	
Till the state of	12 + MARTON	He	C	CHANOF

CHAIN OF CUSTODY RECORD , NO. 221836

FAX # COMPARESS:

SAMPLER: STORM WATE DOG

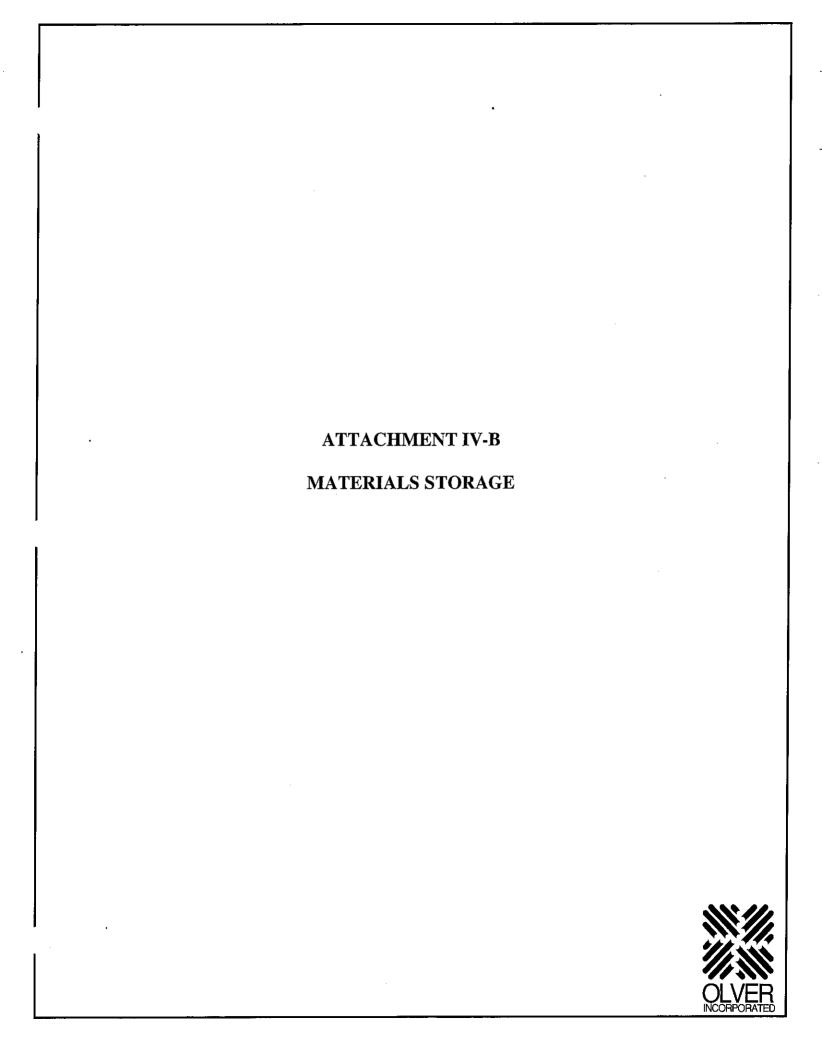
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# Western Virginia Water Authority

# Water Pollution Control Plant Storm Water Sample Collection Notes

Date of last rain event (0.1	l" or greater): <u>.5 . 24</u>	.08	Hours since last rain event (0.1" or greater):
Date: 5-28.05 Sto	orm Start Time: 8:3	30 Ston	m End Time: 3:30 Quantity of Rain (inches):3
Total Discharge Volume:			Maximum Flow Rate: 33 gallons per minute
OUTFALL 009:			
Grab Sample: Time Col	lected: L:57	·	Sampler's Signature:
Temperature: <u>20.1</u> %	Time of Analysis:		Analyst's Signature: Schellen
pH: 7.68 S.U. Tot. Res. Cl <sub>2</sub> : 0.15mg/L			Analyst's Signature: College S. Claude S. Analyst's Signature: College S. Claude S. Cl
Flow-weighted Composite	e Sample:		
Time: 2:37 p.M	Level:	Flow:	Vol. of Subsample:
			Vol. of Subsample:/
Time:3:07pm	Level:/ 11	_ Flow:	Vol. of Subsample:
Time: 3:32 p.m.	, Level:	_ Flow:	Vol. of Subsample:
Time: 3.37	Level:/	_ Flow:	Vol. of Subsample: 1L
Time:3! S2	Level:	Flow:	Vol. of Subsample:
Time: <u>+4:07</u>	Level: ///	_ Flow: _	Vol. of Subsample:
Time: 4:22	Level:	Flow:	Vol. of Subsample:
Time: 4:37	Level: /2_	Flow:	Vol. of Subsample:/
Time: 4:52	Level: Y2"	_ Flow: _	Vol. of Subsample: 1/2 L
Time;			Vol. of Subsample: 1/2 L
Length of composite sample TOTAL VOLUME COLLEC	TED:		her
Sampler's Signature: Comments:	in Richards	نسدد	





# WESTERN VIRGINIA WATER AUTHORITY VPDES PERMIT VA0025020 FORM 2F ATTACHMENT IV-B

<u>Part IV. Item B.</u> Provide a narrative description of significant materials that are currently or in the past three years have been treated, stored or disposed in a manner to allow exposure to storm water; method of treatment, storage, or disposal; past and present materials management practices employed, in the last three years, to minimize contact by these materials with storm water runoff; materials loading and access areas; and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.

The bulk chemicals utilized at the facility include the following: ferric chloride, sodium hypochlorite, diesel, sodium bisulfite, gasoline, and lubricants. The chemical storage areas for these chemicals have indoor storage or secondary containment and do not contact storm water. The diesel fuel is present in a regulated UST which has constant leak monitoring and is in full compliance with current regulations.

The potential exposure relates to the delivery areas for ferric chloride, ferrous chloride, sodium hypochlorite, and diesel fuel. This exposure is limited to a spill which might occur when these tanks are being filled. This is managed through spill response efforts as outlined within the storm water pollution prevention plan.

The facility does not utilize soil conditioners or fertilizers. The only pesticides utilized at the facility are for interior building spaces and pesticides which have received EPA approval as non-dangerous to aquatic life. The facility employs a state licensed pesticide applicator. Any use of pesticides is done by these employees. The employees follow all manufacturers' recommendations for the quantity and application methods applied.

The facility currently uses herbicides to kill poison oak and poison ivy in areas around the plant. The facility contracts the application of Garlon 3A to a commercial firm. The contract company also sprays Aqua Neat Aquatic Herbicide around the lagoons at the facility. The contract company follows best management practices during application of any herbicides at this facility.



# ATTACHMENT IV-C CONTROL MEASURES



# WESTERN VIRGINIA WATER AUTHORITY VPDES PERMIT VA0025020

#### FORM 2F ATTACHMENT IV-C

<u>Part IV. Item C.</u> For each outfall, provide the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of the treatment the storm water receives, including the schedule and type of maintenance for control and treatment measures and the ultimate disposal of any solid or fluid wastes other than by discharge.

Outfall 007\* This includes the area east of the Primary and Secondary Clarifiers, including the area surrounding the Scum Concentrator Building, Thickened Sludge Pump Station, and four of the Anaerobic Digesters. The structural controls consist of a dedicated storm water conveyance system consisting of grass-lined ditches and pipes. Nonstructural controls consist of good housekeeping practices such as keeping the roads and conveyance systems clean, conducting periodic inspections, and keeping pervious surfaces vegetated to minimize erosion. The storm water receives no treatment.

Treatment Code: 4-A

Outfall 008 This includes an area at the north of the property located between the Flocculation Basins and Biological Aerated Filters. The structural controls consist of a dedicated storm water conveyance system (grass-lined ditches and pipes), containment around the portable waste oil tank, and drip pads at the hypochlorite and bisulfite loading stations. Nonstructural controls consist of good housekeeping practices such as keeping the roads and conveyance system clean, conducting periodic inspections, and keeping pervious surfaces vegetated to minimize erosion. The storm water receives no treatment.

Treatment Code: 4-A

Outfall 009 This includes the eastern area of the facility: the Administration Building and Maintenance Building and the associated building roof drains, and extends west to the EQ Basins. The structural controls consist of a dedicated storm water conveyance system consisting of grass-lined ditches, pipes, and an artificial wetlands area that treats some of the storm water flow from this drainage area. In addition, there is containment around the ferric chloride, polymer, and hypochlorite tanks. Nonstructural controls consist of good housekeeping practices such as keeping the roads and conveyance system clean, conducting periodic inspections, and keeping pervious surfaces vegetated to minimize erosion.

Treatment Code: Partial wetlands treatment (no code) and 4-A

\* Indicates prior storm water outfall designation; designation may need to be changed to reflect slight change in location after WPCP improvements.





Improving the environment, one client at a time...

225 Industrial Park Drive Beaver, WV 25813 TEL: 304.255.2500 FAX: 304.255.2572

Website: www.reiclabs.com

June 05, 2008

JANIS RICHARDSON WESTERN VA WATER WWTP 1502 BROWNLEE AV SE ROANOKE VA 24014

TEL: (540) 853-1517 FAX (540) 853-1307

RE: STORMWATER 009

Dear JANIS RICHARDSON:

Order No.: 0805H84

REI Consultants, Inc. received 2 sample(s) on 5/29/2008 for the analyses presented in the following report.

Please note two changes you may see on your report.

- Results for "Dissolved" parameters will be shown under a separate sample ID, rather than as a separate analysis under the same sample ID. The sample ID for "Dissolved" parameters will include "Field Filtered" or "Lab Filtered", as appropriate.
- Metals results will no longer be identified as "Total" or "Total Recoverable". The methods have not been changed, only their appearance on the report.

If you have any questions regarding these results, please do not hesitate to call.

Sincerely,

Joy Mullins

Project Manager





Improving the environment, one client at a time,

225 Industrial Park Drive Beaver, WV 25813 TEL: 304.255.2500 FAX: 304.255.2572

Website: www.reiclabs.com

# Report Narrative

Project Manager:: Joy Mullins

WO#:

0805Н84

ager:: Joy Mullins

Date:

6/5/2008

CLIENT:

WESTERN VA WATER WWTP

Project:

STORMWATER 009

All analyses were performed using documented laboratory SOPs that incorporate appropriate quality control procedures as described in the applicable methods. REI Consultants, Inc. (REIC) technical managers have verified compliance of reported results with the REIC's Quality Program and SOPs, except as noted in this case narrative. Any deviation from compliance is explained below and/or identified within the body of this report by a qualifier footnote which is defined at the bottom of each page.

All samples were analyzed using the methods stated in the analytical report without modification, unless otherwise noted.

All sample results are reported on an "as-received" basis unless otherwise noted.

Results reported for sums of individual parameters, such as Total Trihalomethanes (TTHM) and Total Haloacetic Acids (HAA5), may vary slightly from the sum of the individual parameter results. This apparent anomaly is caused by rounding individual results and summations at reporting, as required by EPA.

Following standard laboratory protocol, sample preservation, such as pH, is verified at time of extraction or analysis based on client requested parameters. Improper preservation is noted on the analytical bench sheet, extraction log, or preservation log and client is notified by close of following business day. All results are reported using preservation compliant samples unless otherwise noted in the analytical report.

The test results in this report meet all NELAP requirements for parameters for which accreditations are required or available. Any exceptions are noted in this report. This report may not be reproduced, except in full, without the written approval of REIC.

In compliance with federal guidelines and standard operating procedures, all reports, including raw data and supporting quality control, will be disposed of after five years unless otherwise arranged by the client via written notification or contract requirement.

**Analytical Results** 

Date: 05-Jun-08

CLIENT:

WESTERN VA WATER WWTP

Client Sample ID: SW 009 GRAB

Project:

STORMWATER 009

Site ID:

WorkOrder:

0805H84

Lab ID:

0805H84-01A

Collection Date: 5/28/2008 1:57:00 PM

Matrix:

STORMWATER

Analyses	Result	Units	Qual 1	MDL	PQL	Date Analyzed
METALS BY ICP-MS			E200.8			Analyst: DBB
Nickel	ND	mg/L		NA	0.0100	6/2/2008 10:51:21 AM
Selenium	ND	mg/L		NA	0.0050	6/2/2008 10:51:21 AM
MERCURY, TOTAL			E245.1			Analyst: DL
Mercury	ND	mg/L		NA	0.0010	5/30/2008 1:38:00 PM
HEXAVALENT CHROMIUM, DISSOLVED	)		SM3500-CR D			Analyst: CHW
Chromium, Hexavalent		mg/L		NA	0.010	5/29/2008 11:41:00 AM
M-COLI BLUE24			E10029			Analyst: <b>KK</b>
E-Coli	> 32000	col/100mL		NA	1	5/29/2008 4:40:00 PM
BOD, 5 DAY, 20°C			SM5210 B			Analyst: B\$
Biochemical Oxygen Demand	ND	mg/L		NA	2	6/3/2008 1:02:00 PM
CHEMICAL OXYGEN DEMAND			E410.4			Analyst: <b>DSA</b>
Chemical Oxygen Demand	73	mg/L		NA	10	5/30/2008 12:40:00 PM
CYANIDE			E335.4			Analyst: BA
Cyanide, Total	ND	mg/L		NA	0.020	6/2/2008 12:10:00 PM
ANIONS BY ION CHROMATOGRAPHY			SM4110B		·	Analyst: SB
Nitrogen, Nitrate-Nitrite	1.39	mg/L	•	NA	0.10	6/2/2008 8:22:00 PM
PHOSPHORUS			SM4500-P BE			Analyst: SB
Phosphorus, Total	0.44	mg/L		NA	0.05	6/3/2008 9:15:00 AM
TOTAL K.IELDAHI NITROGEN (TKN)			SM4500-NORGO	С		Analyst: <b>J</b> L
Nitrogen, Kjeldahl, Total	2.7	mg/L		NA	1.0	6/3/2008 7:30:00 AM
OII AND GREASE			F1664			Analvst: JL
Oil & Grease	ND	mg/L		NA	5.0	6/4/2008 9:30:00 AM
TOTAL SUSPENDED SOLEDS			SM2540 D			Analyst: GV
	13	mg/L	JINES-TO D	NA	1	5/30/2008 8:00:00 AM
TOTAL KJELDAHL NITROGEN (TKN) Nitrogen, Kjeldahl, Total OIL AND GREASE	2.7 ND	mg/L	SM4500-NORG0 E1664 SM2540 D	NA NA	5.0	6/3/2008 7:30:00 Analyst: <b>J</b> 6/4/2008 9:30:00 Analyst: <b>G</b>

Key:	MCL	Maximum Contaminant Level	В	Anal
	MDL	Minimum Detection Limit	E	Estin
	NA	Not Applicable	H	Hold
	ND	Not Detected at the PQL or MDL	S	Spik
	PQL	Practical Quantitation Limit	*	Valu
	TIC	Tentatively Identified Compound, Estimated Concentration		

- alyte detected in the associated Method Blank
- imated Value above quantitation range
- lding times for preparation or analysis exceeded
- ke/Surrogate Recovery outside accepted recovery limits
- ue exceeds Maximum Contaminant Level

**Analytical Results** 

Date: 05-Jun-08

CLIENT:

WESTERN VA WATER WWTP

Client Sample ID: SW 009 COMP

Project:

STORMWATER 009

Site ID:

WorkOrder:

0805H84

Lab ID:

0805H84-02A

Collection Date: 5/28/2008 5:00:00 PM

Matrix:

**STORMWATER** 

Analyses	Result	Units	Qual I	MDL	PQL	Date Analyzed
METALS BY ICP-MS			E200.8	÷		Analyst: <b>DBB</b>
Nickel	ND	mg/L		NA	0.0100	6/2/2008 10:57:11 AM
Selenium	ND	mg/L		NA	0.0050	6/2/2008 10:57:11 AM
MERCURY, TOTAL			E245.1			Analyst: <b>DL</b>
Mercury	ND	mg/L		NA	0.0010	5/30/2008 1:40:00 PM
HEXAVALENT CHROMIUM, DISSOLVED			SM3500-CR D			Analyst: CHW
Chromium, Hexavalent	ND	mg/L	Н	NA	0.010	5/29/2008 4:52:00 PM
BOD, 5 DAY, 20°C			SM5210 B			Analyst: BS
Biochemical Oxygen Demand	ND	mg/L		NA	2	6/3/2008 1:04:00 PM
CHEMICAL OXYGEN DEMAND			E410.4			Analyst: DSA
Chemical Oxygen Demand	56	mg/L		NA	10	5/30/2008 12:40:00 PM
ANIONS BY ION CHROMATOGRAPHY			SM4110B			Analyst: <b>SB</b>
Nitrogen, Nitrate-Nitrite	0.57	mg/L		NA	0.10	6/2/2008 10:10:00 PM
PHOSPHORUS			SM4500-P BE		* *	Analyst: SB
Phosphorus, Total	0.34	mg/L		NA	0.05	6/3/2008 9:15:00 AM
TOTAL KJELDAHL NITROGEN (TKN)			SM4500-NORGO	;		Analyst: <b>JL</b>
Nitrogen, Kjeldahl, Total	2.0	mg/L		NA	1.0	6/3/2008 7:30:00 AM
TOTAL SUSPENDED SOLIDS			SM2540 D			Analyst: <b>GV</b>
Total Suspended Solids	12	mg/L	01112010	NA	. 1	5/30/2008 8:00:00 AM

Key:	MCL	Maximum Contaminant Level

MDL Minimum Detection Limit

NA Not Applicable

Not Detected at the PQL or MDL ND

Practical Quantitation Limit PQL

Tentatively Identified Compound, Estimated Concentration

Analyte detected in the associated Method Blank

E Estimated Value above quantitation range

Holding times for preparation or analysis exceeded

Spike/Surrogate Recovery outside accepted recovery limits

Value exceeds Maximum Contaminant Level

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HEI Consultants, Inc.
225 Industrial Park Rd.
P.O. Box 286, Beaver, WV 25813
Phone; 304-255-2500 or 800-999-0105
FAX; 304-255-2572
e-mail: rlabs@reiclabs.com

CHAIN OF CUSTODY RECORD AVE. TELEPHONE # (566 CONTACT PERSON: PHOJECT ID: 54 E-MAIL ADDRESS: SITE ID & STATE: SEAX# ADDRESS: 1502 Brown/ee GITY/STATE/ZIP. ROON O KC2. CLIENT: WWD PURCHASE ORDER # CITY/STATE/ZIP: BILL TO: QUOTE#

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Phone: 304-255-2500 or 800-999-0105 FAX: 304-255-2572 REI Consultants, Inc. 225 Industrial Park Rd. P.O. Box 286, Beaver, WV 25813 e-mail; rlabs@reiclabs.com

CLIENT: WULDE

OTVISTATE/ZIP. ROCK ORE , Va 24014 ADDRESS 1502 Brownke Ave

Above

BILL TO:

PURCHASE ORDER#

QUOTE #

CITY/STATE/ZIP:

CHAIN OF CUSTODY RECORD , NO. 221836 contact person 9. Rechards CONTACT PERSON TELEPHONE #

E-MAIL ADDRESS: SITE ID & STATE FAX #

PROJECTION SHOPM Water ONG SAMPLER

Email Results COMMENTS tacered hy. (Signalare) PRESERVATIVE CODES 2 FAX Results S S Formposettate Upon Antival > Date Airx 4 Sodium Thiosuitate (Correpri 5 Sodium Hydroxide : केप्प*र*ा 1 Hydrochloric Acid DATE / TIME MATRIX | COMP / GRAB Comp Comp 0 No Preservative (Journap (Comp.) Comp Semo) SAMPLE PRESERVATIVES 3 Sulfuric Acid 6 Zinc Acetate 2 Mitrie Acid T EDTA Received by Signature 35 N.S. 6.28.08 (50) SA J J Ŋ 3-Day 2:Day \*Kinsh work needs prior Laboratory approved and with include sercinalities. 5-033 1-Day NO. & TYPE OF SAMPLING CONTAINERS DATE/THE 213 Tam Six TURNAROUND TIME REQUIREMENTS 27.7.0 1.0.0 Q. 'HUSH: REGULAR: ָם י 2 1 4 4 7 4-6 ANALYSIS REQUEST S W 009 SAMPLE LOG SAMPLE ID 50000 5 w 009 S0000 50000 SW009 5000 50000 AND SWOOG